

5 ISSUES AND IMPROVEMENT RECOMMENDATIONS

The Study Team compiled a comprehensive list of transportation issues to be considered for the study area. This was followed by meetings with area residents, field investigations, analysis and assessments of existing conditions. The Study Team then developed preliminary recommended improvements and met again with area residents to obtain comments and inputs. The following are the Study Team's recommendations to improve safety and transportation operations in the study area.

5.1 INTER-CONNECTION OF TRANSPORTATION ISSUES

It has become apparent to the Study Team that safety, traffic, and parking issues in the study area are significantly inter related. The Friendship Heights neighborhood offers great shopping and entertainment opportunities for area residents and also brings many visitors and shoppers into the area. Neighborhood streets are easily accessible to Wisconsin Avenue and have become a place for non-residents to park freely.

As previously discussed, the two key intersections in the study area are Wisconsin Avenue/Western Avenue and Military Road/41st Street/Reno Road. Any traffic delays and back-ups at these intersections have ripple effects throughout the neighborhood. First, traffic delays at these intersections can spill over to other intersections on Western Avenue and Military Road. Traffic congestion and delay can then result in increased traffic cut-through on local streets and alley ways to avoid the back-ups. The congestion can also lead to higher rates of aggressive driving behavior, resulting in a higher accident potential. The key indicators of delay at these intersections are long queues on Military Road, Wisconsin Avenue, and Western Avenue. The analysis of the existing conditions and field observations reveal that the longest queues exist on Military Road eastbound during PM peak hours. As traffic volumes increase due to background growth and proposed developments discussed in section 3 (future traffic condition), these conditions will continue to worsen.

The Study Team recognizes and emphasizes the inter connection of transportation issues and improvement options. It is critical to keep sight of the "carrot and stick" relationship of the recommendations. The primary objective is to reduce the incentive to cut-through on local neighborhood streets by improving traffic flow on the major arterials (the carrot). This objective is reinforced through use of selective traffic calming on local neighborhood streets making it much less desirable to cut-through (the stick).

The following section describes the various traffic issues at key intersections and corridors. Issues and recommendations are also presented categorically by intersection, corridor and special issues. Each component of the chapter is presented as follows:

- Issue: states the concern, problem or need for improvement
- Recommended Short-Term Improvement(s): various solutions that could potentially address the issue and may be implemented within 12 months. This section includes a description of all the improvement alternatives considered in the evaluation. Based on the

evaluation of the alternatives, some of the preliminary improvements may not be recommended for actual implementation.

- Recommended Long-Term Improvement(s): various solutions that could potentially address the issues, but the implementation would generally take longer than 12 months.
- Evaluation(s): analysis of recommendations.

5.2 WISCONSIN AVENUE CORRIDOR

Issue(s):

- Shared parking / travel lane often blocked during PM peak hours. Vehicles do not comply with posted parking prohibition (4 PM to 6:30 PM), thereby effectively reducing the usable travelway from three lanes to two lanes.
- The effective PM peak hour often extends beyond 6:30 PM. Legally parked vehicles restrict capacity.
- Double parking in front of Mazza Gallerie and Chevy Chase Pavilion.
- Improper use (double parking) of Maggiano's valet pullout.
- Movement onto southbound Wisconsin Avenue from westbound Western Avenue is not allowed. Alternative travel route (via Jenifer Street) is not clearly defined.
- High pedestrian jay-walking between Jenifer Street and Western Avenue.
- Difficulty exiting from public parking garage in Chevy Chase Pavilion onto Wisconsin Avenue due to constant traffic flow on Wisconsin Avenue.
- Illegal U-turn at mid-block of Wisconsin between Jenifer Street and Western Avenue.
- Arterial traffic flow on Wisconsin Avenue may be unnecessarily disrupted due to signal phasing for side streets when demand is not present.
- Turning movements into and out of side streets are constrained by parking close to the intersection
- Left turns out of unsignalized intersections onto Wisconsin during peak hours can be very difficult and create a high potential for safety concerns.

Recommended Short Term Improvement(s):

- Provide better enforcement of parking prohibition between 4 PM and 6:30 PM to ensure availability of full roadway capacity.
- Extend limit of peak period from 6:30 PM to 7 PM.
- Provide better/additional signage to direct left-turn movement from Western Avenue westbound onto Wisconsin Avenue southbound via Jenifer Street. See Exhibit 44 for preferred routing. Preferred route will be enhanced by changing the stop control of the Jenifer Street/44th intersection, allowing free flow for Jenifer Street.
- Remove parking meters from Wisconsin Avenue northbound from the garage exit to the intersection of Western Avenue.
- Restrict parking on side streets at the approaches to Wisconsin Avenue. In most cases, a minimum of 40 feet from the corner should be established.
- Consider restricting left turns out of the unsignalized side streets during peak periods.

Recommended Long Term Improvement(s):

- Place a pedestrian mid-block signal crossing on Wisconsin Avenue between Jenifer Street and Western Avenue near the public parking garage entrance in the Chevy Chase

Pavilion. The crossing should be accompanied by an actuated pedestrian signal system that will be located near the entrance of the public parking garage. The system needs to be fully coordinated with signals at Western Avenue and Jenifer Street. See Exhibit 45.

- Construct improvements to the northbound approach to Western Avenue as shown on Exhibit 46. Improvements include a relocation of the bus stop with a bus turn-off, construction of a short right turn lane, and an improved right turn radius. The desired right turn lane cannot be fully developed due to the Metro ventilation system located near the existing curb line.
- Install semi-actuated signal control, including side street detection for the intersections at Jenifer, Harrison and Fessenden Streets.

Evaluation(s):

- Better enforcement of parking and loading restrictions will provide improved traffic flow on this important arterial roadway.
- Removal of parking meters on Wisconsin Avenue between the garage exit and Western Avenue in the northbound direction will improve the capacity of the intersection of Wisconsin and Western Avenues.
- A mid-block signalized pedestrian crossing near the public parking garage will reduce jay-walking on Wisconsin Avenue.
- Adequate signage will guide drivers to the proper alternative routing to southbound Wisconsin Avenue from westbound Western Avenue.
- Improvements to the northbound approach to Western Avenue will improve the operation of this critical intersection.
- Restricting parking near the intersections will assist in safe and efficient turning movements.
- Restricting left turns out of the unsignalized side streets during peak periods will improve safety and capacity

Exhibit 44: Wisconsin Avenue Southbound Directional Guide

Exhibit 45: Wisconsin Avenue Mid-Block Pedestrian Crossing

Exhibit 46: Wisconsin Avenue Right-Turn Improvement

5.3 WESTERN AVENUE CORRIDOR

Issue(s):

- Close proximity of many signalized intersections (at GEICO Entrance, Jennifer Street, 44th Street, Wisconsin Avenue, Military Road, and Wisconsin Circle) along Western Avenue create difficulties for smooth traffic flow on this arterial.
- Poor directional signage for routing left-turn movements from westbound Western Avenue onto southbound Wisconsin Avenue. Currently, left-turn movements are prohibited. The preferred route onto southbound Wisconsin Avenue is via Jennifer Street.
- Short left-turn bay for eastbound Western Avenue at Wisconsin Avenue.
- Faded pedestrian crosswalks.
- Faded lane markings.
- Traffic signals located at low-volume side streets cause interruptions in the heavy arterial flow on Western Avenue.

Recommended Short Term Improvement(s):

- Improve signage for westbound Western Avenue vehicles that want to go southbound on Wisconsin Avenue. The improved signs should direct vehicles to take Western Avenue to Jennifer Street intersection then turn left to reach Wisconsin Avenue southbound. (See Exhibit 44),
- Place temporary double-faced Jersey Barriers as center median on Western Avenue to extend from Wisconsin Avenue to Jennifer Street. Installation shall be placed for at least 90-day during test period as recommended by DDOT.
- Reconfigure 44th Street and Hecht's parking entrance to be right in and right-out only and place existing signal on flashing operation.
- Re-stripe pedestrian crosswalks to current DDOT standards
- Re-stripe lane markings.
- Reallocate signal timings to maximize green time for the heavier arterial flow.

Recommended Long Term Improvement(s):

- Replace double-faced Jersey Barriers with permanent raised median. See Exhibit 47 for design concept.
- Remove signal system at 44th Street.
- Provide semi-actuated signal systems to reduce unnecessary stops and delays in the arterial flow and to optimize the allocation of green time.

Evaluation(s):

- New / additional signs will alert drivers unfamiliar with the area of the proper route for westbound Western Avenue traffic to southbound Wisconsin Avenue.
- Adding the raised median along Western Avenue west of Wisconsin Avenue will visually help direct traffic making the Western Avenue westbound to Wisconsin Avenue southbound movement.
- The raised median will provide additional left storage for westbound vehicles at Wisconsin Avenue and eastbound vehicles at Jennifer Street.

- The right in/right out only movements at 44th Street and Hecht's parking lot will reduce the number of conflicts on Western Avenue, increasing capacity and safety.
- The removal of the signal system at 44th Street will simplify traffic operations on Western Avenue.
- Faded crosswalks and markings reduce driver visibility and decrease pedestrian safety.
- Semi-actuated traffic signals at the volume side streets will reduce the number and duration of interruptions to the arterial flow of traffic on Western Avenue.

Exhibit 47: Western Avenue Improvement

5.4 INTERSECTIONS

5.4.1 Wisconsin Avenue/Fessenden Street Intersection



Looking South



Looking West

Issue(s):

- Poorly delineated pedestrian crossings.
- Faded lane striping.
- Significant traffic volume on eastbound and westbound Fessenden Street making left and right-turn movement onto Wisconsin Avenue. Currently, one shared left/through/right lane is provided in each direction.

Recommended Short Term Improvement(s):

- Re-stripe pedestrian crossing as recommended in Section 5.8 Pedestrian Safety.
- Re-stripe all approaches of the intersection. Include separate left turn lane and through/right lanes on the westbound approach.

Recommended Long Term Improvement(s):

- Provide improved left-turn lanes on Fessenden Street.
- Provide vehicular detection on Fessenden Street and operate signal as a semi-actuated system. Include pedestrian actuation for crossing Wisconsin Avenue.

Evaluation(s):

- Replacing the striping at this intersection will improve visibility and safety.
- Adding a designated left-turn lane on Fessenden Street will increase intersection capacity and safety.
- Operation as a semi-actuated system will reduce stops and delays on Wisconsin Avenue.

5.4.2 Wisconsin Avenue/Jenifer Street Intersection



Looking North



Looking East

Issue(s):

- Lack of lane striping.
- No defined separate right-turn lane on Jenifer Street heading eastbound.
- Inadequate crosswalks and sidewalks for north-south crossings at northeast and southwest corners of this intersection.

Recommended Short Term Improvement(s):

- Re-stripe all approaches of the intersection and pedestrian crossing.
- Add a separate right-turn lane on eastbound Jenifer Street, with paint and lane use signs to better define the Jennifer Street eastbound to Wisconsin Avenue southbound movement.
- Add additional signs to help direct vehicles to complete the designated left-turn movement from Western Avenue westbound onto Wisconsin Avenue southbound using Jenifer Street at Western Avenue. See Exhibit 44 and discussion of the Wisconsin Avenue Corridor.

Recommended Long Term Improvement(s):

- Remove parking meters on Wisconsin Avenue northbound from Jenifer Street to the parking garage entrance.
- Enhance sidewalk/crosswalk at Jenifer Street.

Evaluation(s):

- Replacing the striping at this intersection will improve visibility and safety.
- Removing parking meters will improve capacity of Wisconsin Avenue between Jenifer Street and Western Avenue. Enhanced flow on Wisconsin Avenue may reduce traffic turning onto Jenifer Street and 43rd Street to get to Military Road eastbound.
- Proper positioning of sidewalks/crosswalks is essential to provide pedestrian safety. Inadequate sidewalk/crosswalk configurations will force pedestrians to walk in vehicular paths, which may result in increased pedestrian and vehicular conflicts.

5.4.3 Wisconsin Avenue/Western Avenue Intersection



Looking Northwest



Looking North-Northeast

Issue(s):

- Excessive queuing along Wisconsin southbound due to heavy volume of left turns heading eastbound onto Western Avenue. Although the left-most lane is not restricted to left turn only, the signal phasing prohibits the left turn during a portion of the through phase. This condition creates unsafe lane switching by through vehicles.
- Excessive queuing along Western eastbound due to left turns going northbound on Wisconsin Avenue. Queue exceeds available storage.
- Wisconsin Avenue northbound right lane congested at Western Avenue due to nearby Metro Bus stop, friction from parking operations, and lack of exclusive right-turn lane.
- Tight radii for vehicle movements turning right from Western Avenue to northbound Wisconsin Avenue.
- Wisconsin Avenue northbound left turn movement onto Western Avenue westbound is prohibited, and lacks the proper signage.
- High pedestrian movements and visitor confusion regarding location of entrances to Metro station.
- Poor roadway striping conditions.

Recommended Short Term Improvement(s):

- Re-stripe Wisconsin northbound, north of Western Avenue.
- Re-stripe pedestrian crossing as recommended in Section 5.8, Pedestrian Safety.
- Provide a detailed area map at the metro station to guide visitors and tourists.
- Install No Left Turn sign on the northwest corner for northbound vehicles.

Recommended Long Term Improvement(s):

- The southbound approach should be reconstructed to have an exclusive left lane, two through lanes and a right lane.
- Reconstruct the curb line at the northwest quadrant (Wisconsin and Western Avenues) with a larger radius.
- Relocate the bus stop on the Wisconsin northbound approach, to be a minimum of 100 feet from the intersection. See Exhibit 46 in Section 5.2
- Provide improved pedestrian crosswalk markings on the western side of the intersection.

- Extend the median along Western Avenue past 44th Street and lengthen left turn lane. (See Exhibit 47 for detailed drawing in Section 5.3).
- Remove parking meters from Wisconsin Avenue northbound to add designated right-turn lane onto Western Avenue (See Exhibit 46).
- Work with Metro to provide improved signage, especially on the southwest corner.

Evaluation(s):

- Re-striping the pedestrian crosswalks to the current DDOT standards will provide additional safety for pedestrians.
- Providing an exclusive left turn lane for the southbound approach will eliminate the lane-switching by through vehicles.
- Increasing the radius in the northwest quadrant will provide additional room to assist larger vehicles (including the Metro buses) in turning the corner from Wisconsin Avenue southbound onto Western Avenue westbound.
- New/additional signs will alert drivers unfamiliar with the area of the proper alternative routing for westbound Western Avenue to southbound Wisconsin Avenue.
- Adding the raised median along Western Avenue west of Wisconsin Avenue will visually help direct traffic making the Western Avenue westbound to Wisconsin Avenue southbound movement.
- While existing directional guides at the metro station exits at the Western Avenue are informative, more detailed area maps of the area are needed to assist visitors. Area maps are provided near the fare machine area; however, placing a detailed area map right before the exits will help visitors and tourists choose the correct path to the street that will minimize crossing the surface streets to reach their destinations.
- Removing parking meters on Wisconsin Avenue between Jenifer Street and Western Avenue in the northbound direction will improve the capacity of the intersection of Wisconsin and Western Avenues.
- The Maryland-National Capital Park and Planning Commission (M-NCPPC) has identified transportation improvement requirements for the selected developers. The M-NCPPC mandated developers to provide a designated left-turn lane on Wisconsin southbound. This can reduce excessive queuing observed at the intersection of Wisconsin and Western Avenues.

5.4.4 Western Avenue/Jenifer Street Intersection



Looking Northwest

Issue(s):

- Poor lane striping.
- Poor lane use signings.
- Poor signing of lane reduction along Jenifer Street south of Western Avenue.
- Heavy bus use due to close proximity to the Metro bus garage.

Recommended Short Term Improvement(s):

- Re-strips all approaches to the intersection.
- Install appropriate lane use signs.
- Re-stripe the existing southbound Friendship Boulevard approach (within the exiting curbs) from the existing one left-turn lane and one through/right lane to one left-turn lane, one through lane, and one through/right lane. Install lane use signs.
- For the Jenifer Street approach, designate an exclusive left turn lane and a through/right lane. Install markings and lane use signs.
- New signal phasing is needed at this intersection to provide split phasing for Friendship Boulevard and Jenifer Street.

Recommended Long Term Improvement(s):

- See recommendations in Section 5.3 – WESTERN AVENUE CORRIDOR.

Evaluation(s):

- Replacing the striping at this intersection will improve visibility and safety.
- Re-striping the existing southbound Friendship Boulevard approach accompanied by changing the lane configuration is required to developers in Montgomery County by the Maryland-National Capital Park and Planning Commission. Giving separate lane for each lane will improve the Friendship Boulevard approach. This will also encourage drivers from southbound Wisconsin Avenue to take Friendship Boulevard to

connect to westbound Western Avenue, thereby avoiding the right turn onto Western Avenue from southbound Wisconsin Avenue.

- Lane use signs and markings will alert drivers of the proper lane usage.

5.4.5 Western Avenue/Military Road Intersection



Looking Northwest



Looking Northeast

Issue(s):

- Confusing intersection due to unconventional road alignment.
- Lack of queuing area along Western Avenue between Military Road and Wisconsin Avenue.
- Close proximity to Embassy Suites drop off area.
- Tight curb returns.
- Operation of intersection can be adversely affected by queuing of Military Road/41st Street/Reno Road intersection.
- Poor alignment and sidewalk condition for safe pedestrian and wheelchair crossings at the intersection.

Recommended Short Term Improvement(s):

- Add additional striping and signage indicating lane usages.
- Modify signal timing at both this location and at Military Road/41st Street to alleviate the eastbound congestion between the two intersections.
- Coordinate signal phasing timing with intersection at Wisconsin and Western Avenues. Revise the signal coordination schedule for intersections at Western Avenue and Military Road and at Western Avenue and Wisconsin Avenue.
- Coordinate with Embassy Suites to improve operations at drop-off area.

Recommended Long Term Improvement(s):

- Re-align pedestrian crossings on Military Road by reconstructing the islands for easier access for pedestrian and wheelchair use.

Evaluation(s):

- Optimizing the signal timing and improved coordination of signals along Western Avenue should improve capacity of the intersection by allowing more vehicles to enter

Western Avenue westbound and pass through the signals at the Western Avenue/Wisconsin Avenue intersection.

- Improved alignment of crossing markings and island crossing will increase safety of pedestrians and handicapped traffic.

5.4.6 Western Avenue/41st Street/McKinley Street Intersection



Looking Northwest

Issue(s):

- Signs prohibiting left-turns from Western Avenue westbound to 41st Street southbound are not being obeyed (no left turn between 7:00AM and 9:30AM). These left-turn violations cause significant back ups along Western Avenue westbound.
- Tight radii for large vehicle turning movements from all approaches.
- Poorly delineated pedestrian crossings.

Recommended Short Term Improvement(s):

- Increase enforcement of existing signage. Consider placement of traffic camera to record violations.
- Re-stripe pedestrian crossing as recommended in Section 5.8 Pedestrian Safety.
- Increase the radius in the southwest quadrant from Western Avenue eastbound onto 41st Street southbound.

Recommended Long Term Improvement(s):

- Provide an exclusive right-turn slip ramp from Western Avenue eastbound onto 41st Street southbound.
- Widen Western Avenue to provide left turn storage lanes.
- Install a fully-actuated traffic control system to maximize the allocation of green time.

Evaluation(s):

- Replacing the striping at this intersection will improve visibility and safety.
- Improved larger radius in the southwest quadrant at the intersection will allow vehicles to make right-turns more easily.

- Vehicles making tight right-turns usually need to slow down considerably compared to the through vehicles. Providing an exclusive right-turn slip lane from Western Avenue will enhance the traffic movement and improve capacity at the intersection by reducing conflicts between right-turn movement vehicles and through traffic movement.
- Construction of left turn lanes on westbound Western Avenue will remove vehicles from the through lanes and improve safety and capacity of the intersection.

5.4.7 41st Street/Livingston Intersection

Issue(s):

- Faded pedestrian crosswalks.
- Inadequate pedestrian walk time for safe crossing of pedestrians.

Recommended Short Term Improvement(s):

- Re-stripe pedestrian crosswalks to current DDOT standards.
- Retime pedestrian crossing phase.

Recommended Long Term Improvement(s):

- None

Evaluation(s):

- Faded crosswalks reduce driver visibility and decrease pedestrian safety.
- Having longer pedestrian crossing time will provide greater safety for pedestrians..

5.4.8 41st Street/Legation Intersection



Looking South



Looking West

Issue(s):

- Faded pedestrian crosswalks.
- Poor sight distance from Legation Street looking south on 41st Street. Geometry of 41st street contributes to the problem as 41st Street is on curved alignment.

Recommended Short Term Improvement(s):

- Re-stripe pedestrian crosswalks to current DDOT standards.

- Remove two parking spaces on 41st Street on the southeast corner of the intersection.
- Install pedestrian crossing signs on 41st Street approaches to the intersection.

Recommended Long Term Improvement(s):

- None

Evaluation(s):

- Faded crosswalks reduce driver visibility and decrease pedestrian safety.
- Vehicles parked too close to the intersection reduce driver visibility of on-coming vehicles.
- Pedestrian crossing signs will increase driver awareness of the potential pedestrian activity.

5.4.9 Military Road/41st Street/Reno Road Intersection



Looking East



Looking South

Issue(s):

- Excessive queuing on Military Road heading eastbound, especially during the PM peak hour. The queuing has been observed to extend all the way back to Western Avenue.
- Confusing intersection for drivers due to proximity of the two signal systems.
- Poor signal timing. Currently, the existing signal system gives preference to the lower volume roads (41st Street and Reno Road vs. Military Road).
- Limited left-turn movements allowed.

Recommended Short Term Improvement(s):

- Reset timing of the signal phases; currently (during PM peak-hours) Reno has a 35 second green phase, Military has a 25 second green phase, and 41st Street northbound has a 15 second green phase. The side streets are allocated much more green time even though more than twice the traffic uses Military compared to Reno Road.
- Install vehicular detection equipment on all approaches.
- Improve intersection signage to remove confusion.
- Install a red light camera system to assist in monitoring prohibited movements and red light running.

Recommended Long Term Improvement(s):

- Reset the Military Road eastbound curb line back two feet to allow enough room for a 150 ft long right-turn lane to be constructed. Prohibit parking within the limits of the turn lane. See Exhibit 48.
- Install a fully actuated traffic control system.

Evaluation(s):

- Retiming the signal will reduce the green time that is currently given to Reno Road and 41st Street, which have lower traffic volumes than Military Road. Allotting the additional green time to Military Avenue will help reduce much of the severe queuing problem.
- Operation as an independent, fully-actuated signal will optimize the approach of green time to the approaches with the greatest demand. This will increase capacity and reduce delay for all vehicles.
- Use of red light cameras will help detect illegal left-turn movements and red light running that reduces capacity and creates safety concerns.
- The construction of a separate right-turn lane on eastbound Military Road will remove the right-turning vehicles from the through vehicles and allow a higher capacity for the eastbound approach.
- A modern roundabout was evaluated for potential implementation at the intersection. However, due to local community opposition, the roundabout alternative has been dropped from further consideration.

If above improvements do not relieve traffic congestion experienced on Military Road, the following two alternatives may be considered.

Alternative Long-Term Improvement(s):

- **ALTERNATIVE 1:** Close 41st Street south of the intersection by placing a temporary double-faced Jersey Barrier across the southern section of 41st Street. This will convert this complex, five-legged intersection into a simple four-legged intersection. Advance signage (eg. “No Outlet”) would be required at Jenifer Street and a small turn-around would need to be constructed. Remove the appropriate signal phase and retime remaining phases. This improvement should be tested for at least 90-days as recommended by DDOT before the permanent traffic movement change.
- If Alternative 1 is selected, replace the double-faced Jersey Barrier across southern section of 41st Street with a raised grassed panel or planter to make closure more permanent after the 90 day trial period.
- **ALTERNATIVE 2:** Make 41st Street one-way southbound from Military Road to Jenifer Street.

Evaluation(s) for Alternative Improvement(s):

- With Alternatives 1 and 2, the 41st Street approach will be removed from the signal operation and the intersection will be simplified to operate at an improved level of service.

Exhibit 48: Military Road Right-Turn Lane

5.4.10 Military Road/42nd Street Intersection



Looking North



Looking East

Issue(s):

- Although the 42nd Street northbound approach at Military Road is signed for “Right Turn Only”, drivers were observed making left turns and some through movement.
- Queuing on Military Road heading eastbound caused by the 41st Street intersection can extend beyond 42nd Street westward, blocking the intersection.
- Limited sight distance for vehicles entering onto Military Road from 42nd Street.
- Intersection is a high accident location.

Recommended Short Term Improvement(s):

- Reinforce turn restriction for northbound vehicles with the addition of supplemental signing on the southwest corner of the intersection.
- Remove parking spaces along Military Road on either side of 42nd Street in order to improve sight distance.
- Install parking stall striping to define parking limits.
- Relocate “No Parking Here To Corner” sign.
- Install “Do Not Block Intersection” signs for both directions.
- Provide increased enforcement to raise conformance of restrictions.
- Re-stripe pavement markings.
- Improve signal timing at the intersection of Military Road and 41st Street to provide additional green time for Military Road.

Recommended Long Term Improvement(s):

- For the northbound approach, increase right turn radius and install a raised channelizing island to force drivers to make right turn only.
- Improvements recommended at 41st Street and at Western Avenue should significantly reduce the queuing problems.

Evaluation(s):

- Improving the signal timing at the 41st Street signal will decrease the queues which now extend back to the intersection of 42nd Street.

- Installing “Do Not Block Intersection” signs will allow easier access to and from 42nd Street during period with length queues from other intersections.
- Improved signage will increase adherence to regulations
- Additional enforcement will increase adherence to regulations
- Installation of a positive barrier in the form of a raised island will make it difficult for drivers to complete the restricted movement.
- Removal of parking spaces will improve sight distance from 42nd Street.
- Having adequate sight distance will improve the safety for both vehicles and pedestrians.

5.4.11 Military Road/43rd Street Intersection



Looking East



Looking West

Issue(s):

- Faded pavement markings.
- Limited sight distance for vehicles entering onto Military Road from 43rd Street.
- Queuing on Military Road heading eastbound caused by the 41st Street intersection which can extend beyond 43rd Street westward, blocking the intersections along Military Road.
- Queuing on Military Road heading westbound caused by the Western Avenue intersection. Back-ups can extend beyond 43rd Street.
- High pedestrian volumes.
- Wheelchair ramps do not conform to ADA and DDOT standards.

Recommended Short Term Improvement(s):

- Re-stripe pavement markings.
- Remove two parking spaces along Military Road east of 43rd Street, in order to improve sight distance.
- Install parking stall striping to define parking limits.
- Relocate “No Parking Here To Corner” sign.
- Install “Do Not Block Intersection” signs.

Recommended Long Term Improvement(s):

- Improvements recommended at 41st Street and at Western Avenue should reduce the queuing problems.
- Reconstruct wheelchair ramps to current ADA and DDOT standards.

Evaluation(s):

- Removal of parking spaces will improve sight distance from 43rd Street.
- Having adequate sight distance will improve the safety for both vehicles and pedestrians.
- Installing “Do Not Block Intersection” signs will allow easier access to and from 43rd Street during periods with lengthy queues from other intersections.

5.4.12 42nd Street and Jenifer Street Intersection

Issue(s):

- Excessive speeding has been reported for vehicles traveling on 42nd Street
- Limited sight distance due to parked vehicles and vegetation.

Recommended Short Term Improvement(s):

- A more extensive engineering study should be conducted to evaluate the need for and effectiveness of a four-way stop control at this intersection. The study would include the collection of speed data, accident analysis, and sight distance measurements.

Recommended Long Term Improvement(s):

- None

Evaluation(s):

- A four-way stop control would decrease the speed of vehicles on 42nd Street and could improve the safety for both pedestrians and vehicles crossing on Jenifer Street. However, an engineering justification study should be conducted prior to the implementation.

5.4.13 Intersection on Harrison Street at 41st Street and 42nd Street

Issue(s):

- Excessive speeding has been reported for vehicles traveling on 41st and 42nd Street
- Limited sight distance due to parked vehicles and vegetation.

Recommended Short Term Improvement(s):

- A more extensive engineering study should be conducted to evaluate the need for and effectiveness of a four-way stop control at this intersection. The study would include the collection of speed data, accident analysis, and sight distance measurements.

Recommended Long Term Improvement(s):

- None

Evaluation(s):

- A four-way stop control would decrease the speed of vehicles on 41st and 42nd Streets and could improve the safety for both pedestrians and vehicles crossing on Harrison Street. However, an engineering justification study should be conducted prior to the implementation.

5.4.14 Garrison Street and 44th Street Intersection



Looking North



Looking West

Issue(s):

- Non compliance with the stop sign has been reported. (Study Team observations inconclusive)
- Non compliance with the truck restriction has been reported. (Study Team observations inconclusive)

Recommended Short Term Improvement(s):

- Provide increased enforcement to increase compliance with restrictions.
- Install a “Stop Ahead” sign for westbound vehicles on Garrison Street.
- At the truck exit from Rodman’s, install supplemental signage prohibiting left turns by trucks. The signage should comply with the Manual on Uniform Traffic Control Devices.
- Install “One Way” signs on the south end of the alleyway between Garrison and Harrison Streets.

Recommended Long Term Improvement(s):

- None

Evaluation(s):

- Improved signage will increase adherence to regulations
- Additional enforcement will increase adherence to regulations

5.4.15 River Road/Fessenden Street/45th Street Intersection



Looking Southwest

Issue(s):

- Excessive speeding on River Road with the 85th Percentile speed 13 MPH over the posted speed limit.
- Dangerous intersection for vehicles traveling on either Fessenden Street or 45th Street due to wide pavement areas, high-speed traffic on River Road, and poor visibility from Fessenden and 45th Street.
- Dangerous intersection for pedestrian crossings.

Recommended Short Term Improvement(s):

- Increase enforcement of existing speed limit.
- Place speed measuring devices on River Road that measure actual speeds and visually indicate speed to all drivers.
- Discontinue through movement except for bicycle at the intersection of 45th and Fessenden Street by placing a temporary double-faced Jersey Barrier along River Road. This will be accompanied with two breaks for pedestrians and bicycles at the pedestrian crossing (bicycle boulevard) for at least a 90-day trial period.

Recommended Long Term Improvement(s):

- Replace the double-faced Jersey Barrier with a permanent raised grassed median with bicycle boulevard along River Road at the intersection of River Road, Fessenden Street, and 45th Street. See Exhibit 49.

Evaluation(s):

- The introduction of the raised median along River Road will reduce travel speed, which in turn will reduce the quantity as well as the severity of accidents. The median should be designed to limit the travel way width at the intersection to help reduce the speeds.
- Adding a median to River Road will eliminate dangerous turning movements and the potential for accidents.

- Restricting the movements on these streets will greatly reduce the through traffic volume on Fessenden and 45th Streets. Residents in neighborhood will still have access through adjacent streets.
- Increasing the width of the median at the approaches to the intersection will slow vehicle speeds. These wider median will also reduce pedestrian crossing distances and provide mid-crossing refuge for pedestrian.

Exhibit 49: River Road Raised Median

5.5 43RD STREET

Issue(s):

- The section of 43rd Street between Military Road and Jenifer provides multiple functionality, including access to abutting residential and commercial parcels; parking for residential, commercial and Metro users; traffic circulation; and cut-through traffic.
- The paved surface is too narrow for two-directional traffic with parking on both sides.
- Significant cut-through vehicle traffic on 43rd Street in spite of existing diverter being in place. The cut-through traffic on 43rd Street in the northbound direction may be seeking to avoid congestion and delays at the Wisconsin/Western Avenues intersection. The cut-through traffic on 43rd Street in the southbound direction may be seeking to avoid the difficult movement from Military Road and Western Avenue onto southbound Wisconsin Avenue.
- Some cut-through traffic on 43rd Street appears to be using the local alleys between 43rd Street, 42nd Place, and 42nd Street. It appears that much of this traffic may be seeking to avoid traffic congestion along Military Road as well as bypassing the existing diverter at the intersection of 43rd Street and Jenifer Street.

Recommended Short Term Improvement(s):

- First, implement other planned improvements in the study area, especially the improvements at Military Road/41st Street/Reno Road and on the Wisconsin Avenue and Western Avenue corridors.
- Monitor traffic on 43rd Street to see the effectiveness of these other improvements in improving conditions on 43rd Street.
- Restrict parking from two hours to one hour with “Zone 3 Permit.”

Recommended Long Term Improvement(s):

- Reconstruct in its current configuration of the diverter with improved landscaping.
- Consider potential bicycle boulevard.

Evaluation(s):

- Implementation of the recommended improvements at other locations may assist in reducing the utilization of 43rd Street.

Alternative Recommendations

During the public comment period, more responses were directed to the segment of 43rd Street between Jenifer Street and Military Road than any other location in the study area. Although there was some support for the concept of reversing the orientation of the diverter at the intersection of 43rd Street and Jennifer Street, the vast majority of comment strongly opposed this change. Therefore, the reversing of the diverter is being dropped from further consideration.

However, other public comments received suggest the potential for alternative changes to this area. Comment was made on the congested and hazardous conditions on 43rd Street due

to the two-way traffic with parking on both sides on a narrow street. These conditions are exacerbated by the presence of delivery vehicles and loading operations. Consideration should be given to the follow:

- 43rd Street one way southbound between Military Road and Jenifer Street. This will eliminate the very tight passage of two-way traffic and will allow all of the existing parking to remain. Consideration should also be given to making 42nd Place one-way northbound, but this additional change could be independent from the changes on 43rd Street.
- To control the potential for increased speeds on 43rd Street, it is recommended that speed tables be constructed.

5.6 SIGNING

Issue(s):

- Missing signs pose a safety hazard.
- Faded and obscured signs pose a safety hazard.
- Conflicting, extraneous and inconsistent signs create confusion.
- Lack of general maintenance of signs and posts contribute to the aforementioned issues.
- Non-standard signs are a violation of the Manual on Uniform Traffic Control Devices (MUTCD) and create confusion.
- Missing and inconsistent Stop sign control.
- Confusing roadway movement restriction signs.

Recommended Short Term Improvement(s):

- Replace all missing signs.
- Replace faded signs with new signs.
- Trim trees and other vegetation blocking signs.
- Replace multiple signs with one concisely worded sign.
- Establish standards for sign wording, and replace all signs not meeting these standards.
- Establish standards as to mounting height, panel rotation, acceptable panel and post conditions and correct all signs and posts not meeting these standards.
- Replace all non-standard signs with standard MUTCD signs.

Recommended Long Term Improvement(s):

- Conduct a comprehensive sign inventory to initiate a maintenance record.
- Maintain standards established in short-term improvements.

Evaluation(s):

- Clear, concise, well-maintained signs improve driver knowledge and therefore safety.
- Replacing multiple signs with a single sign will reduce maintenance costs.
- The Friendship Heights area has several roadway movement restrictions and may be confusing to visitors. Clearer signs describing the roadway movements will improve the safe flow of traffic.

5.6.1 Missing Stop Signs

There are two locations where the Stop sign traffic control was missing.

1. Harrison Street at 45th Street (currently two-way stop at 45th Street side)
2. 44th Street southbound approach at Jenifer Street (should be All-Way Stop)

The Harrison Street (at 45th Street) Stop sign has been already approved by DDOT in response to resident requests. The installation of a Stop sign at this location is scheduled for this



44th Street southbound at Jenifer Street

year. The Study Team recommends that Stop sign at intersection of 44th Street southbound at Jenifer Street be installed in the near future to ensure both vehicular and pedestrian safety at this intersection.

5.6.2 Study Area Signing Examples

Many signs were observed throughout the study area. The following examples represent a few of the major problems and as well as good signing examples that the Study Team identified during the study.

Missing Signs

- Right-turn warning sign at northbound 43rd Street at diverter.

Faded / Worn Signs

- Some signs are faded beyond recognition.



Obscured Signs

- Signs blocked by overgrown trees or shrubs.



Conflicting / Extraneous Parking Signs

- Two separate signs in the same location giving different restrictions causing confusion.
- Multiple signs used in place of a single sign.



Inconsistent Wording on Signs

- Variable wording of restrictions throughout the study area can cause confusion.



- General Maintenance
- Leaning signs are safety hazards.
- Bent, skewed, or misaligned makes it difficult to read or see.
- Completely out of the ground or panels removed from posts.



Non-Standard Signs

- Can cause confusion.
- Do not meet MUTCD standards.



Good Signs

- Meet MUTCD standards, in good condition, and the intent are clearly presented.



Correctly Modified Signs

- Clearly presents intent and meet MUTCD standards.



Sign Mountings

- Mount directional parking restriction signs side by side instead of stacked to more clearly define intent.



5.6.3 Recommended Sign Improvements

Most signs in the study area were in acceptable conditions except at locations identified in Exhibit 50. Some of the “No Parking” signs are faded and require replacement. Furthermore, two locations on Western Avenue (facing westbound near Livingstone Street) and 41st Street (facing southbound near Ingomar Street) were identified as having a “No Left Turn” and “25 MPH” speed limit signs which need to be relocated to maximize the effectiveness of the signs. Additionally, five locations were identified as requiring supplementary signs to further assist existing signs to better inform lane usages or advance warnings.

Exhibit 50: Sign Improvements

5.7 PARKING/LOADING/TRUCK OPERATIONS



Chevy Chase Pavilion Loading Dock



Mazza Gallerie Loading Dock

Issue(s):

- Commuters from other residential areas of Zone 3 drive to Friendship Heights to use the Metro and park on surface streets legally for the entire day.
- Commuters from outside Zone 3 drive to Friendship Heights to use the Metro and park illegally on surface streets for greater than the permitted two hours.
- Large number of commercial zone shoppers park on surface streets within neighborhood areas. Due to lack of enforcement, many exceed the permitted two hours.
- Portions of parking in the commercial zone are unrestricted.
- Many private and commercial vehicles block major routes by double-parking while loading or unloading.
- Northbound flow on Wisconsin Avenue during PM peak hour is restricted due to parking in the right lane.
- Limited access to Chevy Chase Pavilion parking garage and bellhop area of Embassy Suites due to road blockage caused by loading dock operations at Chevy Chase Pavilion.
- Northbound Wisconsin Avenue is partially blocked by activities at valet parking bay in front of Maggiano's restaurant.
- Parking areas are not clearly defined as to what parking is permitted at what times.
- Improper use of the loading docks at area businesses.
- Some delivery trucks (for the building at 5225 Wisconsin Avenue) use the 5300 block of 43rd Street for loading, blocking the street.

Recommended Short Term Improvement(s):

- Stronger and more consistent enforcement.
- Have stores "comp" or validate one to two-hour shopping trips to increase utilization of surface lots and garages.
- Introduce additional parking meters within one block of the business district along Wisconsin Avenue to better regulate parking and increase City revenue.
- Add more loading and unloading zones and strictly enforce use of loading zones.
- Enforce double parking controls.

- Extend peak parking restrictions for northbound Wisconsin Avenue to 7:00 PM.
- Remove trash dumpsters and improperly stored items from loading docks.
- Consider adding separate, marked parking areas for service vehicles.
- Loading dock manager should be more responsible for management of loading dock operations and their impact upon the public.
- Restrict illegal use of the valet parking in front of Maggiano's restaurant.
- Replace inconsistent parking restriction signs with one standard and consistent sign.
- Delineate limits of parking between intersections within the study area with a "L" shaped pavement marking placed approximately 25' from curb return.
- DDOT will work with the building manager at 5225 Wisconsin Avenue to see if they can/will allow other deliveries in their block.

Recommended Long Term Improvement(s):

- Add "bump outs" at intersections to better define permitted parking areas as well as to calm traffic and reduce pedestrian crossing distances. These areas could also be landscaped and, if done throughout the study area, would give a consistent appearance to the neighborhoods.

Evaluation(s):

- Improved usage of loading docks will help alleviate the backup onto Military Road.
- Curb "bump outs" will better define the limits of the permitted parking between blocks as well as slow traffic speeds through traffic calming of the vehicles traveling through the neighborhoods.

5.8 PEDESTRIAN AND CYCLIST SAFETY

Issue(s):

- Significant jay-walking was observed across Wisconsin Avenue between Mazza Gallerie and Chevy Chase Pavilion entrances.
- Lack of pedestrian signal actuators at most signalized intersections. Currently only two actuators were observed; at Livingston Street/41st Street and Wisconsin Avenue/Harrison Street intersections.
- Worn or poorly striped crosswalks.
- Potentially dangerous pedestrian crossing at intersection of River Road/Fessenden Street/45th Street.
- Access along some portions of sidewalks throughout the study area was reduced or eliminated due to overgrown landscaping.
- Excessively steep and/or narrow wheelchair ramps do not comply with current ADA (Americans With Disabilities) standards.

Recommended Short Term Improvement(s):

- Add a mid-block crosswalk across Wisconsin. Possibly consider use of raised crosswalk or crosswalk of contrasting materials.
- Add pedestrian signal actuators and re-time signals correctly.
- Re-stripe crosswalks using current DDOT standard crosswalk layouts; use "ladder" striping within crosswalks at higher pedestrian traffic areas.

- Add median along River Road at intersection of River Road and Fessenden Street. See Exhibit 49.
- Trim shrubs and trees so as to provide for full width and clearance of sidewalk area.
- Re-grade areas as required eliminating drainage problems along the sidewalks.
- Repair/reconstruct wheelchair ramps within study area that do not meet the current ADA and DDOT requirements.
- Consider potential bicycle boulevard at the 43rd and Jenifer Streets.
- Remove parking spaces as required to improve sight distance for drivers from local streets onto arterial roadway.

Recommended Long Term Improvement(s):

- Continue to monitor and maintain crosswalk striping as per current DDOT standards.
- Continue to monitor and maintain full width and clearance of sidewalks.
- Add signals to protect pedestrians where warranted.

Evaluation(s):

- Pedestrians will be more likely to use a mid-block crosswalk to travel between Mazza Gallerie and Chevy Chase Pavilion than the existing crosswalks at either end of the block. A raised crosswalk or a crosswalk of contrasting materials will increase driver awareness. By phasing the signals properly, traffic flow can still be accommodated effectively along Wisconsin Avenue.
- Properly functioning pedestrian signals improve their effectiveness. In addition to a pedestrian signals that work, the number of pedestrian cycles per hour is just as important. If pedestrians are asked to wait too long, they will jaywalk if they can.
- If pedestrian signal actuators are in place and functioning, pedestrians will be more likely to wait and cross with correct signal, instead of crossing against the signal. Pedestrian actuators should be installed at all semi-actuated or fully actuated signal system locations.
- Improved crosswalk striping directs pedestrians to cross in a specific area and also focuses driver awareness of allowed pedestrian crossings. "Ladder" striping is highly visible and would therefore augment both pedestrian and driver awareness.
- Adding a median to River Road will eliminate turning movements and the potential for accidents, and also provide an area for pedestrian refuge. Adding striped crosswalks that meet DDOT standards in this area as well, will better delineate pedestrian crossing areas.
- Trimming overgrown landscaping will encourage pedestrians to use walking as a mode of transportation, and prevent the potentially unsafe condition of pedestrians walking in the street in order to avoid obstructed sidewalks.
- Reconstructing the wheelchair ramps to meet the current ADA and DDOT standards will providing safer access to the sidewalks. Steep and narrow wheelchair ramps are very difficult for handicapped to ascend, and are a potential safety hazard.